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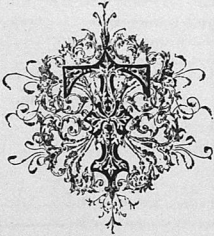
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THE DECORATOR AND FURNISHER.

GLASS.

BY MAURK HAYWOOD.



THE art of glass making goes so far back into antiquity that its origin is entirely lost in obscurity. Some have maintained that the honor of its invention is due to Tubal Cain, mentioned in the fourth chapter of Genesis, some even that in his time it was already known. However that may be, for there are no means of

proving the correctness of these suppositions, it is an undoubted fact that glass making was practised in Thebes two thousand years if not more before the Christian era. Among the painters, by certain writers believed to have been executed as early as 3,500 B. C., are figures of Theban glass makers with furnace and blow pipes. Both Tyre and Sidon are also mentioned by ancient historians as noted for the manufacture of glass.

According to the story given by Pliny, on hearsay evidence, glass was first discovered accidentally by some Phœnicians, who had landed on the coast of Palestine, and not being able to find any stones upon which to place their cooking utensils, they took some cakes of nitre from their cargo to use for that purpose. When they lighted their fire, the nitre melted and mingling with the sand of the shore produced a transparent stream of fluid which proved to be glass.

That glass was prized by the Romans is evident, since it formed part of the tribute demanded by Cæsar Augustus on his conquest of Egypt 26 B. C. This caused a fashion in Rome, where novelties were eagerly sought after, for cups, vases and other articles in that material. A little later, in the reign of Tiberius, manufactories were started by the Romans in their own city; at first taught by the Egyptian artisans, they soon acquired great skill, rivalling the best specimens hitherto imported, and not only were objects of art and luxury produced, but the articles found in tombs prove that glass for ordinary purposes became very common in Rome. Moreover wherever Roman arms prevailed, the conquerors introduced their civilization, their laws, manners and customs; numerous glass works were established both in Gaul and Spain, as is clearly shown by the different objects brought to light by excavations in modern times, and they continued to exist until the period when the invasion of the barbarians struck a deadly blow at the industries and manufactories of the West. The art was however revived in the East under Constantine, who established extensive works at his capital, Byzantium. Theodosius II, a later monarch, gave a further impulse to the trade by exempting glass makers from taxation. For many years it was believed that the use of glass is entirely modern, but recent discoveries at Pompeii have brought to light panes of glass in some of the casements, which prove that they were known at the date of its destruction, although they were evidently not in general use. In fact we have abundant reason to believe that all processes and inventions in this art known to us in modern times have been discovered and practised at some period in antiquity. Glass bottles and drinking glasses have come down to us from the Egyptians and Romans. Even mirrors were, according to ancient writers, very early invented. Pliny speaks of them in several places, and four centuries before his time, Aristotle, the first to mention them, says, "If metals and stones are to be polished to serve as mirrors, glass and crystal have to be lined with a sheet of metal to give back the image presented to them."

One of the most noted places of modern times in connection with the manufacture of glass is Venice. It has been said that the origin of glass making there was contemporary with the foundation of the city, in the fifth century, but it is from the end of the thirteenth century that the industry became of importance to the world. It was at the most brilliant period of the history of Venice as a city, as a maritime power, as a trading and commercial center. She possessed an entire monopoly in those days of the manufacture of all kinds of glass, and by a series of stringent regulations protected and encouraged the industry, at the same time arbitrarily forbidding the export of materials for glass making or even broken glass. In 1289 all factories and works were ordered to be removed from the city on to the little island of Murano, separated from it by a narrow strip of sea, under the pretext that the numerous furnaces exposed the houses and public buildings to the danger of frequent fires. This rendered the supervision of the glass works by the state a comparatively easy matter. At that time the principal production was glass jewelry—trinkets, false pearls, imitation precious stones, beads, etc.—which were exported to Tartary, India and China in large quantities. Marco Polo, the celebrated traveler, returning to Venice about 1295 from the court of Kubla Khan, related to his fellow citizens the taste of the people among whom he had been living for false pearls and gems, and instructed them in the best markets for such wares. This gave great

impulse to the trade, and two men especially—Cristoforo Briani and Dominico Miotto—were most successful in their inventions in glass coloring and blowing imitation pearls. The trade with Asia became infinitely lucrative and brought great wealth to Venice. But as it grew in importance, exciting the rivalry of other countries, so the protective regulations grew more rigorous. The Council of Ten placed the superintendence of the factories in the hands of its chief, and the State Inquisition in the twenty-sixth article of its statutes enacted "that if a workman transport his art into a foreign country a message shall be sent to him to return; if he do not obey, his nearest relations shall be put in prison; if he persists in remaining abroad, notwithstanding the imprisonment of his relations, an emissary shall be commissioned to put him to death." M. Daru, who gives the document in his "*Historie de la République Venise*," adds that he had found evidence in the records of public affairs of two cases in which workmen were actually put to death, having been attracted to Germany by the Emperor Leopold. Although known to the ancients, glass mirrors were for many years but little manufactured, if made at all, in Murano. But early in the sixteenth century, two brothers, Andrea and Domenico d'Anzolo dal Gallo, petitioned the Council of Ten for the exclusive privilege of producing "mirrors of crystalline glass," the secret of which known only to one German house, they had discovered, and wished to practice for the mutual benefit of themselves and the republic. The privilege was granted for twenty-five years, and at the end of that time so many embraced this new industry that they were separated from the glass makers and formed a distinct company.

Of the glasses made at Venice they were of innumerable shapes, sometimes most fantastic and quaint. The common drinking glasses were very wide and shallow, with spiral lines of color in the tall thin stem.

Notwithstanding the rigorous measures of the Venetian Republic, after a time manufactories were started in other countries, in Germany first, and later Bohemia.

In Bohemia the art assumed an entirely new feature, through the invention of engraving on glass, it is believed about 1609 by Gaspar Lehmann, continued by his pupil, George Schaanhard, and so popular became this new system of ornamentation that in the seventeenth century Venetian glass of the fifteenth and sixteenth centuries were decorated by Bohemian engravers, either by the lathe or diamond. The greater part of the glass works in Bohemia were established in the forest districts, for the purpose of utilizing the woods, the workmen were poor, and paid very small wages, the lords owning the woods advancing the necessary capital, and nearly all the products of the factories being exported to other countries. They were enabled to sell the ware very cheaply therefore, and the industry still keeps a large number of the population from want, without enriching them, although many are highly skillful workmen.

In the seventeenth century, in the reign of Louis XIV, the French Minister Colbert resolved to strike a blow at the Venetian monopoly by founding in France a manufactory of looking-glasses; hitherto enormous sums had been paid for those imported from Murano, where they were solely manufactured. In order to obtain the desired secrets, Colbert ordered the French ambassador at Venice, the Bishop of Béziers, to procure for him Venetian workmen for France. The bishop intimated that for so doing he would risk being thrown into the sea. Colbert insisting, however, by dint of money and promises, eighteen workmen fled from Venice and arrived in Paris, 1665. They founded a glass factory, a company having been organized, in the Faubourg St. Antoine, under the title of "Manufactory of Glass Mirrors by Venetian Workmen." In 1669 the importation of mirrors from Murano was forbidden. Trouble arose in the works among the foreigners, who were discontented, some of them furtively departing. They were on the point of being closed when Colbert accidentally learned that a factory existed near Cherbourg, under Richard Lucas, Sieur de Nehou, where mirrors were manufactured, certain young fellows from Strasbourg having by stratagem learned the secrets of the glass makers at Murano. Colbert united the works at Tourlairie to the royal manufactory at Paris, and under his patronage Lucas de Nehou was enabled to produce the first fine French looking-glasses. Louis XIV favored him, ordering mirrors for the royal carriages and for the great gallery at Versailles. Courtiers and nobility followed suit notwithstanding their enormous price.

Venice, however, still smuggled in her glass and greatly injured the rising industry. The first Lucas de Nehou died, 1675, and his son Louis gave a death blow to Venetian rivalry by inventing the method of founding glass, which enabled the manufacture of mirrors of an almost unlimited size. Later the establishment was removed to Saint Gobain.

During the Middle Ages the glass manufacturers were held in great honor by all. Their daughters were considered grand matches to the sons of the nobility. Benard Palissy in his writings says, "*L'art de la verrerie est noble, et ceux qui y besognent sont nobles.*"